

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-4, 6-16, 18-22, 24-26, 28-50, 52-58, and 60-63 are pending in the application, with claims 1, 7, 9, 22, 24, 29, 30, 31, 33, 35, 37, 40, 43, 44, and 45 being the independent claims. Claims 5, 17, 23 and 27 were previously cancelled. Claim 51 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Claim 59 was not present in the original application filing, so Applicants have indicated claim 59 as cancelled. Claims 1, 2, 4, 6, 7, 9, 15, 16, 18-20, 22, 24, 29-31, 33, 35, 37, 40, 43-45, 47-49, 52, 53, and 55 are sought to be amended. New claims 62 and 63 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Objection to the Claims***

The Examiner has objected to claims 34 and 36 as being "identical with common dependence." (See Office Action, page 2). For the Examiner's convenience, claims 34 and 36 are reproduced below:

34. (Original)      The WLAN device of claim 1, wherein said physical layer comprises a frequency hopping spread spectrum physical layer, wherein said

**input** RF signal comprises a 2-level or 4-level Gaussian frequency shift keying modulated signal.

36. (Original)        The WLAN device of claim 1, wherein said physical layer comprises a frequency hopping spread spectrum physical layer, wherein said **output** RF signal comprises a 2-level or 4-level Gaussian frequency shift keying modulated signal.

Claim 34 recites an "input RF signal" and claim 36 recites an "output RF signal." Therefore, Applicants respectfully request reconsideration and withdrawal of the objection to claims 34 and 36 as being identical with common dependence.

***Amendments Generally***

In the manner similar to the way claims 4 and 47 have been amended, claims 1, 2, 4, 6, 7, 9, 15, 16, 18, 20, 22, 24, 29-31, 33, 35, 37, 40, 43-45, 47-49, 52, 53 and 55 have been amended to more broadly and particularly recite the claimed invention.

Claim 19 has been amended to depend from claim 18 to more clearly recite the claimed invention.

Other amendments have been made to the claims to more particularly recite the invention.

***Allowable Subject Matter***

Applicants acknowledge with appreciation the Examiner's indication that claims 7, 9-16, 18-22, 24-26, 29-31, 33, 35, 37-39, 40, 41, 43-45, and 57-60 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." (See Office Action, page 7). Since claim 59 is not present in the original filing, Applicants assume that the Examiner meant to indicate that claims 57, 58, 60, and 61 are allowable subject matter when Examiner referred to claims 57-60.

Claims 7, 9, 22, 24, 29, 30, 31, 33, 35, 37, 40, 43, 44, and 45 has each been amended into an independent form to include significant features of the original base claim 1 and any original intervening claims from which it depended.

Claim 7 has been amended into independent form and includes significant features of the original base claim 1 and original intervening claims 2 and 6 from which it depended.

Claim 9 has been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Claim 22 has been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Claim 24 has been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Claim 29 has been amended into independent forms and includes significant features of the original base claim 1 and original intervening claim 28 from which it depended.

Claim 30 has been amended into independent forms and includes significant features of the original base claim 1 and original intervening claim 28 from which it depended.

Claim 31 has been amended into independent forms and includes significant features of the original base claim 1 and original intervening claim 28 from which it depended.

Claim 33 been amended into an independent form and includes significant features of the original base claim 1 and original intervening claim 32 from which it depended.

Claim 35 been amended into an independent form and includes significant features of the original base claim 1 and original intervening claim 34 from which it depended.

Claim 37 been amended into an independent form and includes significant features of the original base claim 1 and original intervening claim 36 from which it depended.

Claim 40 been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Claim 43 been amended into an independent form and includes significant features of the original base claim 1 and original intervening claim 42 from which it depended.

Claim 44 been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Claim 45 been amended into an independent form and includes significant features of the original base claim 1 from which it depended.

Applicants respectfully submit that independent claims 7, 9, 22, 24, 29, 30, 31, 33, 35, 37, 40, 43, 44, and 45, as amended, are clearly in condition for allowance.

Claims 10-16 and claims 18-21 depend from independent claim 9. At least for the reasons stated above, Applicants respectfully submit that claims 10-16 and 18-21 are clearly in condition for allowance.

Claims 25, 26, 60, and 61 depend from independent claim 22. At least for the reasons stated above, Applicants respectfully submit that claims 25, 26, 60, and 61 are clearly in condition for allowance.

Claims 38 and 39 depend from independent claim 37. At least for the reasons stated above, Applicants respectfully submit that claims 38 and 39 are clearly in condition for allowance.

Claim 41 depend from independent claim 40. At least for the reasons stated above, Applicants respectfully submit that claim 41 is clearly in condition for allowance.

Claims 57-58 depend from independent claim 22. At least for the reasons stated above, Applicants respectfully submit that claims 57-58 are clearly in condition for allowance.

Applicants respectfully submit that claims 7, 9-16, 18-22, 24-26, 29-31, 33, 35, 37-39, 40, 41, 43-45, 57, 58, 60, and 61, as indicated by the Examiner as allowable subject matter, are clearly in condition for allowance, as recited in this Amendment and Reply.

***Rejections under 35 U.S.C. § 103***

In the Office Action, the Examiner has rejected claims 1-4, 6, 8, 28, 32, 42, and 46-56 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent 6,600,795 to Ohta *et al.* (herein referred to as "Ohta") in view of U.S. Patent 5,636,140 to Lee *et al.* (herein referred to as "Lee"). (See Office Action, page 2). The Examiner has also rejected claims 34 and 36 under 35 U.S.C. § 103(a) as being unpatentable over Ohta in view of Lee and further in view of U.S. Patent 6,366,622 to Brown *et al.* (herein referred to as "Brown"). (See Office Action, page 7).

Although the Applicants respectfully disagree, Applicants believe these rejections are accommodated and/or moot in light of the above amendments.

***a. Claim 1***

The Examiner has rejected claim 1 as allegedly being unpatentable over Ohta in view of Lee. For the Examiner's convenience, independent claim 1 as amended is reproduced below:

A wireless local area network (WLAN) device, comprising:  
a medium access control layer; and  
a physical layer coupled to said medium access control layer,  
comprising:  
a physical medium dependent sublayer, wherein said  
physical medium dependent sublayer comprises:  
a receiver that receives an input radio frequency  
(RF) signal, wherein said receiver comprises a ~~universal~~-frequency down-  
conversion (~~UFD~~)-module, wherein said frequency down-conversion  
module comprises a switch module and a storage element, wherein a  
first node of said switch module is coupled to a first node of said  
storage element, wherein said storage element comprises a capacitor,  
and  
a transmitter that transmits an output RF signal; and  
a physical layer convergence procedure sublayer coupled  
to said physical medium dependent sublayer, wherein said physical layer

convergence procedure sublayer controls frame exchange between said medium access control layer and said physical layer.

Claim 1 as amended includes elements of allowable subject matter claim 7. As such, Ohta and Lee, individually or together, do not teach or suggest Applicants' invention as recited in amended independent claim 1. For example, Ohta and Lee, individually or together, do not teach or suggest "wherein said frequency down-conversion module comprises a switch module and a storage element, wherein a first node of said switch module is coupled to a first node of said storage element, wherein said storage element comprises a capacitor" as recited in amended independent claim 1. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1, and allowance thereof.

***b. Claims 2-4, 6, 8, 28, 32, 42, 46-50, and 52-56***

The Examiner has rejected claims 2-4, 6, 8, 28, 32, 42, 46-50, and 52-56 as allegedly being unpatentable over Ohta in view of Lee. Claims 2-4, 6, 8, 28, 32, 42, 46-50, and 52-56 depend from amended independent claim 1 and are patentable for at least the reasons stated above, in addition to the elements, limitations, and/or features recited therein. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2-4, 6, 8, 28, 32, 42, 46-50, and 52-56, and allowance thereof.

***c. Claims 34 and 36***

The Examiner has rejected claims 34 and 36 as allegedly being unpatentable over Ohta in view of Lee and further in view of Brown. Claims 34 and 36 depend from amended independent claim 1. Applicants respectfully submit that Brown does not solve the deficiencies of Ohta and Lee, with respect to amended independent claim 1. Therefore, claims 34 and 36 are patentable for at least the reasons stated above, in addition to the elements, limitations, and/or features recited therein. Applicants therefore respectfully request reconsideration and withdrawal of the rejection of claims 34 and 36, and allowance thereof.

***d. Claim 51***

Claim 51 is sought to be cancelled and therefore Applicants believe that Examiner's rejection of claim 51 has been rendered moot.

***New Claims 62 and 63***

New dependent claims 62 and 63 are sought to be added. For the Examiner's convenience, dependent claims 62 and 63 is reproduced below:

62. The WLAN device of claim 1, wherein a second node of said switch module is coupled to a reference potential.

63. The WLAN device of claim 1, wherein a second node of said storage element is coupled to a reference potential.

Support for claims 62 and 63 are provided in the specification including, for example, Figure 20A and Figure 20G. Applicants believe Ohta, Lee, and Brown, individually or together, do not teach or suggest Applicants' invention as recited in



dependent claims 62 and 63. Therefore, Applicants respectfully submit that claims 62 and 63 are in condition for allowance.

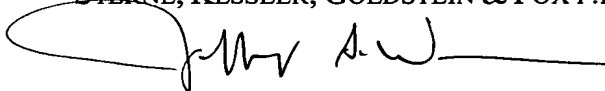
***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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